

PONDWEEDS AND PONDWEEDLIKE PLANTS OF EASTERN NORTH AMERICA



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UNITED STATES DEPARTMENT OF THE INTERIOR

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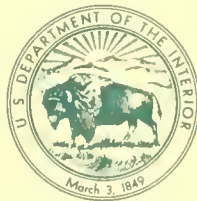
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PONDWEEDS AND PONDWEEDLIKE PLANTS OF EASTERN NORTH AMERICA

By

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CONTENTS

	Page
Plants with oval or oblong floating leaves	3-13
Floating Pondweed	4
Oakes Pondweed	4
Heartleaf Pondweed	5
Bog Pondweed	5
Variable Pondweed	6
Illinois Pondweed	6
Bigleaf Pondweed	7
Longleaf Pondweed	8
Red Pondweed	9
Ribbonleaf Pondweed	9
Snailseed Pondweed	10
Vasey Pondweed	10
Marsh Smartweed	11
Water Smartweed	11
Watershield	12
Broadleaf Waterplantain	12
Upright Burhead	12
Water Arrowhead	13
Longleaf Mudplantain	13
Plants with only oval, oblong, or lance-shaped underwater leaves	14-17
Redhead-grass	14
Whitestem Pondweed	15
Curly Pondweed	15
Variable Pondweed	16
Illinois Pondweed	16
Bigleaf Pondweed	17
Red Pondweed	17
Plants with only threadlike or ribbonlike underwater leaves	18-29
Alga Pondweed	18
Vasey Pondweed	19
Snailseed Pondweed	19
Northern Naiad	20
Southern Naiad	20
Slender Naiad	21
Horned-pondweed	21
Slender Pondweed	22
Fries Pondweed	22
Leafy Pondweed	23
Hill Pondweed	23
Bluntleaf Pondweed	24
Flatstem Pondweed	24
Water-stargrass	25
Ribbonleaf Pondweed	25
Fern Pondweed	26
Widgeongrass	27
Sago Pondweed	27
Bigsheath Pondweed	28
Threadleaf Pondweed	29
Western Pondweed	29

PONDWEEDS AND PONDWEEDLIKE PLANTS OF EASTERN NORTH AMERICA

This is the first of a series of publications on the field identification of the marsh and water plants of eastern North America. It describes twenty-seven pondweeds and thirteen non-pondweeds. Current manuals describe several other kinds of pondweed which I consider to be only variations of those treated here.

Pondweed seeds and rootstocks are among the most important waterfowl foods. Pondweeds are common in freshwater lakes, ponds, streams and marshes from Manitoba to Newfoundland and south to New Jersey and Iowa. A few kinds grow farther north and south; a few grow in the fresh and brackish waters of coastal bays, rivers and ponds.

Pondweeds have limp underwater stems which are from a few inches to a few feet long. These stems are often branched. Some stems come up in spring from rootstocks that live through the winter, some from winterbuds, some from seeds. Near the top of the stems of some kinds are oval or oblong floating leaves. Usually these stems have underwater leaves, too. Looking quite different, the same kinds sometimes have only underwater leaves. Other kinds have only oval or narrower underwater leaves.

In summer, pondweeds produce small greenish or brownish flowers. In most kinds these are packed together in oblong or ball-like heads. In bloom the upper heads stick out of water an inch or two, but by the time the naked seeds ripen most of the heads are back in the water. The non-pondweeds have very different flowers and seeds.

In order to see some underwater plants clearly a person has to bring a stem close to the surface of the water or even take it out. Out of water the leaves often slump together. They can be separated again by laying the plant flat and gently splashing water over it, or by putting it in shallow water in a dish.

The pictures show plants of average size and shape. Those of the upper part of stems, with their leaves and seed heads, are one-half life-size; those of separate heads and leaves are twice life-size.

The plants are described in three groups, according to whether they have

floating leaves (and usually underwater leaves)

Floating Pondweed	Vasey Pondweed
Oakes Pondweed	(also in third group)
Heartleaf Pondweed	Marsh Smartweed
Bog Pondweed	(also a marsh plant)
Variable Pondweed	Water Smartweed
(also in next group)	(also a marsh plant)
Illinois Pondweed	Watershield
(also in next group)	Broadleaf Waterplantain
Bigleaf Pondweed	(early leaves only;
(also in next group)	later a marsh plant)
Longleaf Pondweed	Upright Burhead
Red Pondweed	(early leaves only;
(also in next group)	later a marsh plant)
Ribbonleaf Pondweed	Water Arrowhead
(also in third group)	(also a marsh plant)
Snailseed Pondweed	Longleaf Mudplantain
(also in third group)	(also a marsh plant)

only underwater leaves--oval, oblong, or lance-shaped

Redhead-grass	Illinois Pondweed
Whitestem Pondweed	(also in first group)
Curly Pondweed	Bigleaf Pondweed
Variable Pondweed	(also in first group)
(also in first group)	Red Pondweed
	(also in first group)

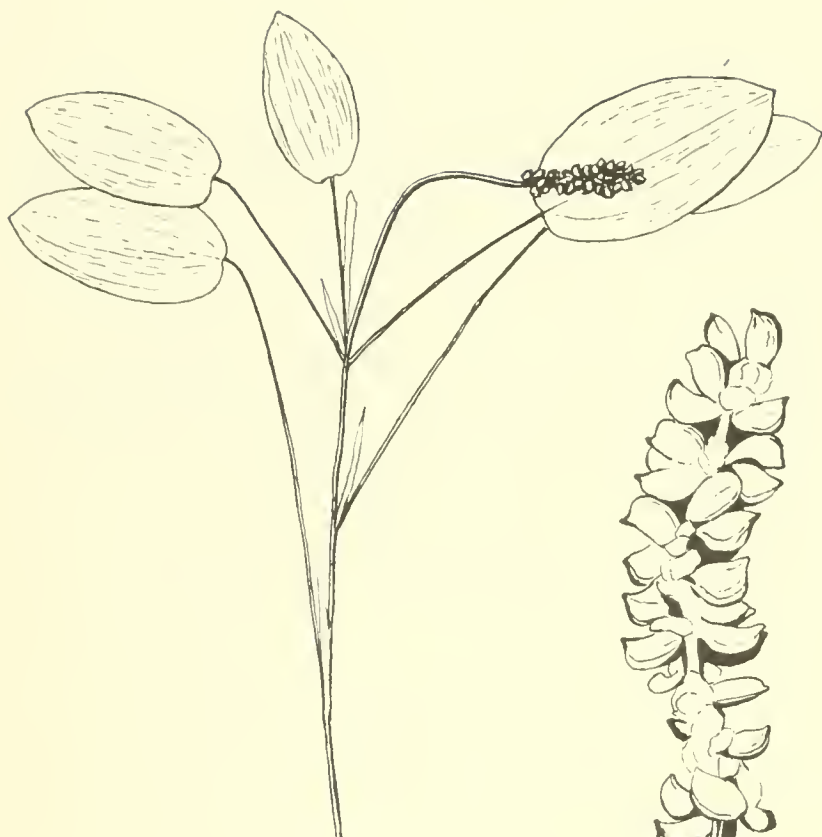
only underwater leaves--threadlike or ribbonlike

Alga Pondweed	Hill Pondweed
Vasey Pondweed	Bluntleaf Pondweed
(also in first group)	Flatstem Pondweed
Snailseed Pondweed	Water-stargrass
(also in first group)	Ribbonleaf Pondweed
Northern Naiad	(also in first group)
Southern Naiad	Fern Pondweed
Slender Naiad	Widgeongrass
Horned-pondweed	Sago Pondweed
Slender Pondweed	Bigsheath Pondweed
Fries Pondweed	Threadleaf Pondweed
Leafy Pondweed	Western Pondweed

PLANTS WITH OVAL OR OBLONG FLOATING LEAVES dot or cover shallow inland fresh waters, particularly in the North. These slender-stalked leaves are near the ends of stems in pondweeds, smartweeds, Watershield and Longleaf Mudplantain; grow in clusters from the bottom in Broadleaf Waterplantain, Upright Burhead and Water Arrowhead. When water levels drop, floating-type leaves are sometimes left growing on wet mud.

The pondweeds also have underwater leaves which have different shapes than the floating ones and are flimsy and often broken from wear and decay. Both kinds of leaves have fine, closely-placed, lengthwise-running veins. The non-pondweeds have differently veined floating leaves and no underwater leaves.

The pictures of the upper parts of stems show top views of floating leaves and side views of stems and underwater leaves.



FLOATING PONDWEED
(*Potamogeton natans*)

Alaska to
Newfoundland, Cal-
ifornia, Indiana
and Maryland.

Underwater
leaves are nothing
but stalks.

Resembles
Oakes Pondweed but
Floating Pondweed's
bigger leaves
usually have a
notched base and
its seeds are more
than 1/8 inch long
and have a loose,
shiny skin.



OAKES PONDWEED
(*Potamogeton oakesianus*)

North side of Lake Superior
to Newfoundland, Wisconsin and New
Jersey.

Underwater leaves are nothing
but stalks.

Resembles Floating Pondweed
but Oakes Pondweed's smaller leaves
have a rounded or tapering base and
its seeds are about 1/8 inch long
and have a tight, dull skin.

HEARTLEAF
PONDWEED
(*Potamogeton pulcher*)

Nova
Scotia and the
eastern half
of U. S.

Underwater
leaves are
often puckered.

Floating
leaves resemble
those of Float-
ing Pondweed
but usually are
deeper notched
at the base and
usually are
widest nearer
the base than
the tip.



BOG PONDWEED
(*Potamogeton oblongus*)

On this side of the Atlantic
has been found only in Newfound-
land, St. Pierre and Sable Island.

Sometimes has lance-shaped
underwater leaves. Seeds are red,
nearly round in side view and a
little more than 1/16 inch long.





VARIABLE PONDWEED
(*Potamogeton gramineus*;
formerly *heterophyllus*)

Alaska to Greenland, California, Iowa and Maryland.

Underwater leaves are often much longer than in the plant pictured. Sometimes there are no floating leaves (see page 16).

Resembles Illinois Pondweed but has smaller leaves and usually is more branched; the stalks of the floating leaves usually are as long as the leaves; and the underwater leaves are stalkless. Resembles Red Pondweed but is more branched and has longer-stalked floating leaves with short-tapered or rounded bases.



ILLINOIS PONDWEED
(*Potamogeton illinoensis*;
includes *angustifolius* and
lucens)

Southern Canada to southern U. S.

Underwater leaves are sometimes slightly arched lengthwise and sometimes puckered. Sometimes there are no floating leaves (see page 16).

Resembles Variable Pondweed but has larger leaves; the stalks of the floating leaves usually are shorter than the leaves; and the underwater leaves are often short-stalked. Resembles Bigleaf Pondweed but has underwater leaves that are only slightly arched. Resembles Longleaf Pondweed but has much-shorter-stalked, less-tapered underwater leaves.



BIGLEAF PONDWEED (*Potamogeton amplifolius*)

British Columbia to Montana and California; and North Dakota to Newfoundland, Oklahoma and Georgia.

Underwater leaves are strongly arched lengthwise. Sometimes there are no floating leaves (see page 17).

Resembles Illinois Pondweed but the underwater leaves are much more strongly arched and are always stalked.



LONGLEAF PONDWEED
(*Potamogeton nodosus*; formerly *fluitans*)

Southern Canada to southern U. S., particularly in slow streams.

Resembles Illinois Pondweed but has long-stalked underwater leaves that are long-tapered at each end.

RED PONDWEED
(*Potamogeton alpinus*)

Alaska to Greenland,
California, Michigan and
Pennsylvania, often in
streams.

Plants are usually
reddish. Sometimes there
are no floating leaves
(see page 17).

Resembles Variable
Pondweed but is less-
branched and has short-
stalked floating leaves.



RIBBONLEAF PONDWEED
(*Potamogeton epihydrus*;
includes *tennesseensis*)

Alaska to Montana,
California and Colorado;
and Manitoba to Quebec,
Iowa and Georgia;
particularly in slow
streams.

Underwater leaves
are ribbonlike and have
a light-colored center
stripe. Sometimes
there are no floating
leaves (see page 25).





SNAILSEED PONDWEED
(*Potamogeton diversifolius*; includes
bicupulatus, *capillaceus* and *spirillus*)

Montana to Newfoundland, California,
Texas and Florida.

Sometimes there are no floating
leaves (see page 19).



Resembles Vasey Pondweed but has
short-stalked or stalkless, ball-like
underwater seed heads; seeds resembling
flat snails; and underwater leaves with
a base that makes a sheath around the
stem.



VASEY PONDWEED (*Potamogeton vaseyi*)

Minnesota to New Brunswick, Illinois and
Pennsylvania.

Sometimes there are no floating leaves (see
page 19).

Resembles Snailseed Pondweed but all the seed
heads are long-stalked; the seeds have convex
sides; and the base of the underwater leaves does
not make a sheath around the stem.

MARSH SMARTWEED
(*Polygonum coccineum*;
formerly *Persicaria*
muhlenbergii)

British Columbia
to Quebec, Califor-
nia, Texas and North
Carolina.

Pink flowers
contain single brown
seeds. A commoner
upright form with
oval, long-taper-
tipped leaves grows
in wet soil and
shallow water.

Resembles Water
Smartweed but has
longer clusters of
flowers on finely-
hairy stalks, and
usually has broader
leaves.



WATER SMARTWEED
(*Polygonum amphibium*;
formerly *natans*)

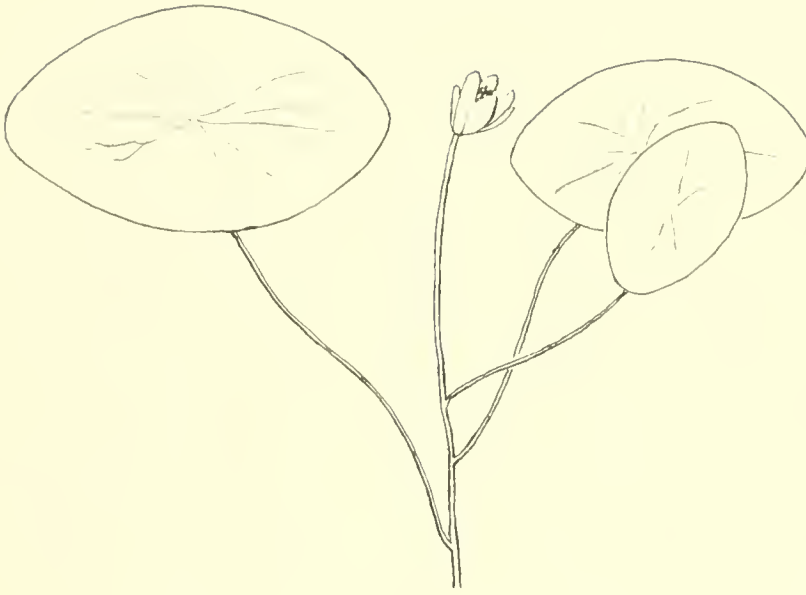
Alaska to Quebec,
California, Illinois and
New Jersey.

An upright form with
narrow leaves grows in wet
soil and shallow water.

Resembles Marsh
Smartweed but has shorter
clusters of flowers on hair-
less stalks, and usually
has narrower leaves.



WATERSHIELD
(*Brasenia schreberi*)



British Columbia to Idaho and California; and Minnesota to Nova Scotia, Texas and Florida.

Leaf stalks are attached to the middle of leaves. Leaf buds, flower buds and underside of leaves are covered with slippery jelly. Each dull red flower produces a cluster of oval or oblong, grayish pods which contain one or two seeds apiece.

BROADLEAF WATERPLANTAIN
(*Alisma plantago-aquatica*;
includes *subcordatum* and
triviale)



British Columbia to Nova Scotia, California, Texas and Florida.

Early leaves, with a few lengthwise-running veins, often float in a cluster in shallow water. Later leaves stand above water or mud around one to several loose flower heads.

Early leaves resemble early leaves of Upright Burhead. The two plants can be told apart by their seed heads.

UPRIGHT BURHEAD
(*Echinodorus berteroi*; formerly *rostratus*)

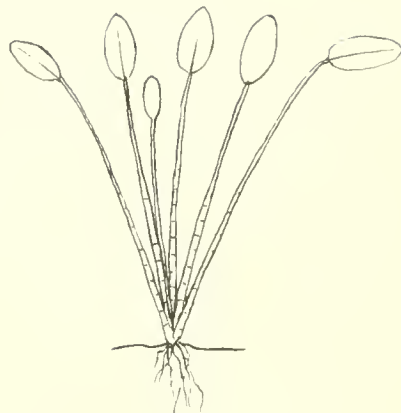
California; Minnesota to Ohio and Texas; and Florida.

Early leaves resemble early leaves of Broadleaf Waterplantain. The two plants can be told apart by their seed heads.

WATER ARROWHEAD
(*Sagittaria subulata*; includes *stagnorum*)

Fresh tidal water and nearby inland water from Massachusetts to Alabama.

Sometimes has oval leaves which float in a cluster in shallow water. They resemble young leaves of Broadleaf Waterplantain in having a few lengthwise-running veins, differ in being smaller and less taper-tipped.



LONGLEAF MUDPLANTAIN
(*Heteranthera limosa*)

Minnesota to Arizona and Florida.

Sometimes the thick-stalked leaves float. They have many fine, lengthwise-running veins, the coarser of which run down the leaf stalk. The leaves are on branched stems that grow in a cluster.



PLANTS WITH ONLY OVAL, OBLONG, OR LANCE-SHAPED UNDERWATER LEAVES grow sparsely or thickly in shallow inland fresh waters in the North. Illinois Pondweed also grows inland in the South, Redhead-grass also in fresh and brackish waters along the Atlantic Coast. The stems grow nearly to the surface of the water and sometimes float just beneath it. Their flimsy leaves are stalkless or short-stalked and have fine, closely placed, lengthwise-running veins. The leaves are often broken from wear and decay.

The pictures of the upper parts of stems are side views.



REDHEAD-GRASS

(*Potamogeton perfoliatus*;
includes *richardsonii*)

Fresh water inland from Alaska to Quebec, California, Indiana and New Jersey; and fresh and brackish water along the Atlantic Coast.

Upper part of stems is usually straight. Leaves vary from oval and flat to lance-shaped and puckered. They have a deeply-notched base and a blunt tip. The blunt-backed seeds are about 1/8 inch long.

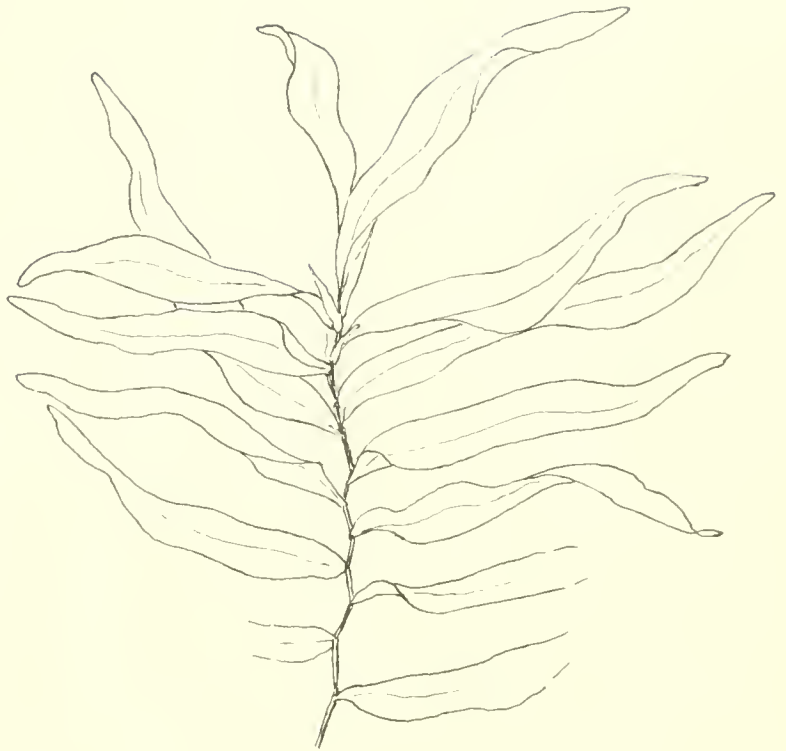
Resembles Whitestem Pondweed but has smaller leaves with deeper notched base, short-stalked seed heads and smaller seeds.

WHITESTEM PONDWEED
(*Potamogeton praelongus*)

Alaska to Newfoundland, California, Indiana and New Jersey.

Upper part of stems is usually zig-zag. Leaves are long-oblong and sometimes puckered. They have a slightly notched base and usually a hooded tip that splits a little way back when it is flattened. The sharp-backed seeds are about 1/4 inch long.

Resembles Redhead-grass but has larger leaves with only slightly notched base, long-stalked seed heads and larger seeds.



CURLY PONDWEED
(*Potamogeton crispus*)

Here and there in Alberta; California to Colorado and Arizona; and South Dakota to Quebec, Oklahoma and Alabama. A native of the eastern hemisphere and still spreading in North America.

Leaves have finely toothed, usually closely puckered, edges. They have a slightly notched base and a very blunt tip.





VARIABLE PONDWEED
(*Potamogeton gramineus*; formerly *heterophyllus*)

Alaska to Greenland, California, Iowa and Maryland.

Leaves are often much longer than in the plant pictured. Usually there are floating leaves (see page 6).

Resembles Illinois Pondweed but has smaller leaves that are always stalkless, and usually is more branched. Long-leaved plants resemble Red Pondweed but are more branched.



ILLINOIS PONDWEED
(*Potamogeton illinoensis*; includes *angustifolius* and *lucens*)

Southern Canada to southern U. S.

Underwater leaves are sometimes slightly arched lengthwise and are sometimes puckered. Usually there are floating leaves (see page 6).

Resembles Variable Pondweed but has larger underwater leaves which are often short-stalked. Resembles Bigleaf Pondweed but has underwater leaves that are never more than slightly arched.

BIGLEAF PONDWEED
(*Potamogeton amplifolius*)

British Columbia to Montana and California; and North Dakota to Newfoundland, Oklahoma and Georgia.

Underwater leaves are strongly arched lengthwise. Usually there are floating leaves (see page 7).

Resembles Illinois Pondweed but Bigleaf Pondweed's underwater leaves are much more strongly arched and are always stalked.

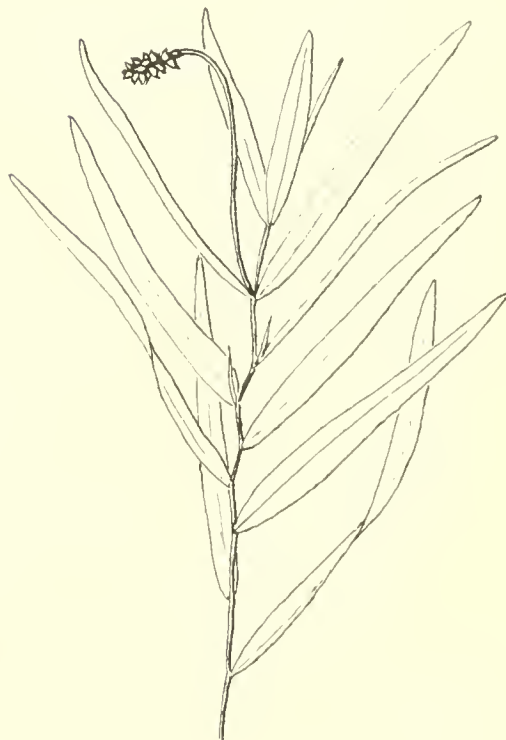


RED PONDWEED
(*Potamogeton alpinus*)

Alaska to Greenland, California, Michigan and Pennsylvania, often in streams.

Plants are usually reddish. Sometimes there are floating leaves (see page 9).

Resembles Variable Pondweed but is less branched and usually has longer leaves.



PLANTS WITH ONLY THREADLIKE OR RIBBONLIKE UNDERWATER LEAVES grow sparsely or thickly in shallow inland fresh waters in the North. A few kinds also grow inland in the South, a few in fresh and brackish waters along the Atlantic Coast. The stems of a few kinds are often too far under water to be clearly seen; stems of the others grow nearly to the surface and sometimes float just beneath it. The leaves are stalkless and have fine, closely placed, lengthwise-running veins. The leaves of most kinds are flimsy and often broken from wear and decay.

The pictures of the upper parts of stems are side views.



ALGA PONDWEED
(*Potamogeton confervoides*)

Wisconsin, and from
Newfoundland to Pennsylvania.

Leaves are in bunches
and are flimsy and hairlike.
Seed heads are very long-
stalked.

VASEY PONDWEED
(*Potamogeton vaseyi*)

Minnesota to New Brunswick, Illinois and Pennsylvania.

Leaves are scattered and almost hairlike and have long-tapered tips. Often there are tiny, short-stalked winterbuds in the angles between leaves and stem. Sometimes there are floating leaves (see page 10).

Resembles Snailseed Pondweed but all the seed heads are long-stalked; the seeds have convex sides; and the base of the underwater leaves does not make a sheath around the stem.



SNAILSEED PONDWEED
(*Potamogeton diversifolius*; includes
bicupulatus, *capillaceus* and *spirillus*)

Montana to Newfoundland, California, Texas and Florida.

Sometimes there are floating leaves (see page 10).

Resembles Vasey Pondweed but has short-stalked or stalkless, ball-like underwater seed heads; seeds resembling flat snails; and underwater leaves with a base that makes a sheath around the stem.





NORTHERN NAIAD
(*Najas flexilis*)

British Columbia to Alberta and Oregon; and South Dakota to Newfoundland, Missouri and Virginia.

Tops of plants are often almost out of sight under water, as in other naiads. There are two leaves at each joint, and sometimes short branches make it look as though there were more. Single seeds are half-hidden between leaf bases and stems. They are long-oval and shiny under a thin, dull skin.



SOUTHERN NAIAD
(*Najas guadalupensis*)

Fresh water inland from Oregon to Quebec, California, Texas and Florida; and fresh and slightly brackish water along the Atlantic Coast.

Resembles Northern Naiad but has stubby, straight leaves and oblong, dull seeds. The plant pictured is a large type that grows in the South. It resembles non-blooming Slender and Leafy Pondweeds but has all its leaves in pairs.

SLENDER NAIAD
(*Najas gracillima*)

Minnesota to Maine,
Missouri and Virginia.

Resembles Northern Naiad
but has longer, slenderer
leaves and oblong, dull seeds.



HORNED-PONDWEED
(*Zannichellia*
palustris)

Fresh and al-
kali water inland
from Alaska to
Newfoundland, Cal-
ifornia, Texas and
Florida; and fresh
and brackish water
along each coast.

Leaves are
in pairs at each
joint, where there
often are clusters
of oblong, slender-
tipped seeds.



SLENDER PONDWEED

(*Potamogeton pusillus*; includes *berchtoldi*, *gemmiparus* and *lateralis*)

Fresh and alkali water inland from Alaska to Greenland, California, Texas and Georgia; and fresh and slightly brackish water along each coast.

Resembles Leafy, Fries, Vasey, Snailseed, Hill and Bluntleaf Pondweeds. It has longer-stalked seed heads than Leafy Pondweed, and its seeds have blunt backs. It has smaller seeds than Fries Pondweed (a little more than 1/16 inch vs. a little less than 1/8 inch); smaller, tighter, smooth-leaved winterbuds; and usually smaller leaves with 3 veins. It has bigger, fatter winterbuds than Vasey Pondweed. It has longer-stalked seed heads than Snailseed Pondweed; convex-sided seeds; and leaves with bases that do not make a sheath around the stem. It has longer-stalked seed heads and smaller seeds than Hill and Bluntleaf Pondweeds; seeds with blunt backs; and usually smaller leaves.



FRIES PONDWEED

(*Potamogeton friesii*; includes *longiligulatus* and *strictifolius*)

Northwest Territories to Newfoundland, Utah, Indiana and Virginia.

Looks like extra big Slender Pondweed but has larger seeds (a little less than 1/8 inch vs. a little more than 1/16 inch); larger, looser winterbuds that are corrugated at the base with raised veins; and usually larger leaves with 5 or 7 veins.

Resembles Hill, Bluntleaf and Leafy Pondweeds. It has longer-stalked, looser seed heads than Hill and Bluntleaf Pondweeds, and its seeds have blunt backs. It has longer-stalked, looser seed heads than Leafy Pondweed; seeds with blunt backs; and usually larger leaves.



LEAFY PONDWEED
(*Potamogeton foliosus*; includes *curtissii*)

Fresh and alkali water inland from Northwest Territories to Nova Scotia, California, Texas and Florida; and fresh and slightly brackish water along each coast.

Resembles Slender, Vasey, Fries, Snailseed, Hill and Bluntleaf Pondweeds. It has shorter-stalked seed heads than Slender, Vasey and Fries Pondweeds; and its seeds have a knife-edged, often scalloped, back. It also has bigger, fatter winterbuds than Vasey Pondweed; usually smaller leaves than Fries Pondweed. Its leaves do not have bases that make a sheath around the stem, as in Snailseed Pondweed; all its seed heads are ball-like and under water; and its seeds are not snail-like. It has smaller seeds (a little more than 1/16 inch vs. 1/8 inch) and usually smaller leaves than Hill and Bluntleaf Pondweeds.

HILL PONDWEED
(*Potamogeton hillii*; includes *porteri*)

Michigan to Vermont, Ohio and Pennsylvania.

Looks like extra big Leafy Pondweed but has larger seeds (1/8 inch vs. a little more than 1/16 inch) and always sharp-tipped, usually larger, leaves.

Resembles Bluntleaf, Fries and Slender Pondweeds. It has sharp-tipped leaves and ball-like seed heads in contrast with Bluntleaf Pondweed's blunt-tipped leaves and oblong seed heads. It has shorter-stalked seed heads than Fries and Slender Pondweeds; and seeds with a sharply-ridged back. Usually it has larger leaves than Slender Pondweed.

BLUNTLEAF PONDWEED
(*Potamogeton obtusifolius*)



British Columbia to Saskatchewan and Wyoming; and Minnesota to Quebec, Michigan and New Jersey; often in slow streams.

Resembles Hill, Leafy, Fries and Slender Pondweeds. It has longer seed heads with more seeds than Hill and Leafy Pondweeds; blunt-tipped leaves in contrast with Hill Pondweed's sharp-tipped ones; and larger seeds and usually larger leaves than Leafy Pondweed. It has shorter-stalked seed heads than Fries and Slender Pondweeds; and the larger seeds have sharply ridged backs. It usually has flimsier leaves than Fries Pondweed, usually larger ones than Slender Pondweed.



FLATSTEM PONDWEED
(*Potamogeton zosteriformis*)

Alaska to New Brunswick, California, Nebraska and Virginia.

Stems are several times wider than thick.

Resembles Water-stargrass but has leaves with a prominent midvein and with a base that does not make a sheath around the stem; and has pondweed-type flower and seed heads.

WATER-STARGRASS

(*Heteranthera dubia*; formerly
Zosterella dubia)

Washington to Montana, California
and Arizona; and North Dakota to
Quebec, Texas and Florida.

Stems are only a little wider than
thick. Short plants sprawling on wet
mud grow and bloom as well as long ones
do in water.

Resembles Flatstem Pondweed but
has leaves without a noticeable midvein
and with a base that makes a sheath
around the stem; and each yellow flower
produces a slender pod which contains
tiny seeds.



RIBBONLEAF PONDWEED

(*Potamogeton epihydrus*;
includes *tennesseensis*)

Alaska to Montana,
California and Colorado; and
Manitoba to Quebec, Iowa and
Georgia; particularly in
slow streams.

Underwater leaves are
ribbonlike and have a light-
colored center stripe.
Usually there are floating
leaves (see page 9).





FERN PONDWEED
(*Potamogeton robbinsii*)

British Columbia to Wyoming, California and Utah;
Manitoba to New Brunswick, Indiana and Virginia; and
Alabama.

Often in dense beds with the tops of the leaves
a foot or more under water. Leaf bases make a sheath
around the stem.

WIDGEONGRASS

(*Ruppia maritima*; includes *occidentalis* and *spiralis*)

Brackish and alkali water inland from British Columbia to Manitoba, California, Oklahoma and Minnesota, and in Missouri and New York; and fresh and brackish water along each coast.

Resembles Sago Pondweed but its leaves are in less-bushy clusters; the sheathing bases of the leaves have a tiny, rounded, firm tip; and each pear-shaped seed is on a stalk by itself.



SAGO PONDWEED

(*Potamogeton pectinatus*)

Fresh and alkali water inland from Alaska to Quebec, California, Texas and Florida; and fresh and brackish water along each coast.

Resembles Widgeongrass but the leaves are in bushier clusters; the sheathing bases of the leaves have a long, tapering, flimsy tip; and the roundish seeds are stalkless. Resembles Bigsheath Pondweed but all the leaves have narrow-sheathed bases and the seeds have a pointed tip. Resembles Threadleaf Pondweed but usually has longer, more-branched stems and larger seeds (1/8 inch or more vs. a little less than 1/8 inch) with a pointed tip. Resembles Western Pondweed but the leaves are much longer and narrower and have narrower sheaths.





BIGSHEATH PONDWEED
(*Potamogeton vaginatus*)

Alberta to Quebec, Colorado, Wisconsin and New York.

Resembles Sago and Threadleaf Pondweeds but usually has longer leaves; the bases of the main-stem leaves make a sheath that is two or more times as wide as the stem; and the stalks of the seed heads are usually shorter than the surrounding leaves. It also differs from Sago Pondweed in having seeds with a flattish, wartlike tip; from Threadleaf Pondweed in the seed heads usually having 6 to 10 clusters of seeds.

THREADLEAF PONDWEED
(*Potamogeton filiformis*; includes
interior)

Alaska to Greenland, California,
Michigan and Pennsylvania.

Resembles Sago Pondweed but the
stems are usually shorter and less
branched and the smaller seeds (a little
less than 1/8 inch vs. 1/8 inch or more)
have a flattish, wartlike tip. Resem-
bles Bigsheath Pondweed but is much
smaller; all the leaves have narrow-
sheathed bases; and the seed heads
usually have only 3 or 4 clusters of
seeds.



WESTERN PONDWEED
(*Potamogeton latifolius*)

Alkali water from Oregon to Texas.

Has short, ribbonlike, blunt-tipped leaves
with bases that make a sheath two or more times the
width of the stem. Seed heads and seeds are almost
the same as those of Sago Pondweed.



INDEX

Alisma plantago-aquatica, 12
 subcordatum, 12
 triviale, 12
 Arrowhead, Water, 13
Brasenia schreberi, 12
 Burhead, Upright, 12
Echinodorus berteroi, 12
 rostratus, 12
Heteranthera limosa, 13
 dubia, 25
 Horned-pondweed, 21
 Mudplantain, Longleaf, 13
 Naiad, Northern, 20
 Slender, 21
 Southern, 20
Najas flexilis, 20
 gracillima, 21
 guadalupensis, 20
Persicaria muhlenbergii, 11
Polygonum amphibium, 11
 coccineum, 11
 natans, 11
 Pondweed, Alga, 18
 Bigleaf, 7, 17
 Bigsheath, 28
 Bluntleaf, 24
 Bog, 5
 Curly, 15
 Fern, 26
 Flatstem, 24
 Floating, 4
 Fries, 22
 Heartleaf, 5
 Hill, 23
 Horned-, 21
 Illinois, 6, 16
 Leafy, 23
 Longleaf, 8
 Oakes, 4
 Red, 9, 17
 Ribbonleaf, 9, 25
 Sago, 27
 Slender, 22
 Snailseed, 10, 19
 Threadleaf, 29
 Variable, 6, 16
 Vasey, 10, 19
 Western, 29
 Whitestem, 15
Potamogeton alpinus, 9, 17
 amplifolius, 7, 17
 angustifolius, 6, 16
 berchtoldi, 22
 bicupulatus, 10, 19

Potamogeton--cont.
 capillaceus, 10, 19
 confervoides, 18
 crispus, 15
 curtissii, 23
 diversifolius, 10, 19
 epihydus, 9, 25
 filiformis, 29
 fluitans, 8
 foliosus, 23
 friesii, 22
 gemmaiparus, 22
 gramineus, 6, 16
 heterophyllus, 6, 16
 hillii, 23
 illinoensis, 6, 16
 interior, 29
 lateralis, 22
 latifolius, 29
 longiligulatus, 22
 lucens, 6, 16
 natans, 4
 nodosus, 8
 oakesianus, 4
 oblongus, 5
 obtusifolius, 24
 pectinatus, 27
 perfoliatus, 14
 porteri, 23
 praelongus, 15
 pulcher, 5
 pusillus, 22
 richardsonii, 14
 robbinsii, 26
 spirillus, 10, 19
 strictifolius, 22
 tennesseensis, 9, 25
 vaginatus, 28
 vaseyi, 10, 19
 zosteriformis, 24
 Redhead-grass, 14
Ruppia maritima, 27
 occidentalis, 27
 spiralis, 27
Sagittaria stagnorum, 13
 subulata, 13
 Smartweed, Marsh, 11
 Water, 11
 Waterplantain, Broadleaf, 12
 Watershield, 12
 Water-stargrass, 25
 Widgeongrass, 27
Zannichellia palustris, 21
Zosterella dubia, 25

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